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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,031	03/18/2004	Denis J. Schaffer	36488-198504	5608
26694	7590	10/16/2008		
VENABLE LLP				
P.O. BOX 34385				
WASHINGTON, DC 20043-9998				
EXAMINER				
NGUYEN, PHU K				
ART UNIT		PAPER NUMBER		
2628				
MAIL DATE		DELIVERY MODE		
10/16/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/803,031

**Applicant(s)**

SCHAFFER, DENIS J.

**Examiner**

Phu K. Nguyen

**Art Unit**

2628

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8 and 10-20 is/are rejected.
- 7) ☒ Claim(s) 4, 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-6, 8, and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the PRIOR ART (figure 1, paragraphs [0005]-[0012]).

As per claim 1, Prior Art teaches the claimed "method" comprising:  
"at least one end condition" (Prior Art, Decision table is used to define an end conditions; the segments HA and HB, paragraph [0008]); "determining a target type of the end condition" (Prior Art, the target point is defined as existing ground; paragraph [0007]); "determining a location of the target" (Prior Art, paragraph [0007]); and "determining when the end condition is valid" (Prior Art, the segments of end conditions hit the target; paragraph [0007]); "dynamically solving the at least one end condition based on a location of a target; and dynamically modifying the display to reflect valid end conditions" (Prior Art, the dynamically calculation and modification in case of valid end conditions; the segments of end conditions hit the target; paragraph [0006]). It is noted that Prior Art does not explicitly teach the "graphical display" of the end condition segments as claimed. However, given the definition of end condition segments in terms of positions, slopes, widths (Prior Art, Decision Table, paragraph [0010]), it would have been obvious to provide a graphical representation of such segments in form of "graphical display" because the graphical representation of line segments within the

roadway design improves the visual recognize of the user instead of just describe in terms of position, slops, width, ...

**RESPONSE TO APPLICANT'S ARGUMENTS:**

Applicant's arguments filed June 26, 2008 have been fully considered but they are not deemed to be persuasive. Applicant just partially adds some features in the claim 4, but not all the features which makes claim 4 allowable. Specifically, the previous claim 4 claims "the current location of the target" which means the target which has been placed (claim 3 which claim 4 depends) and moved (claim 4, line 2). By claiming a non-specific "a location of a target" the current claim 1 is still obvious in view of the Prior Art.

Claim 2 adds into claim 1 "valid end conditions(Prior Art, the segments of end conditions hit the target; paragraph [0007]). It is noted that Prior Art does not explicitly teach the "graphical display" of the valid end condition segment as claimed. However, given the definition of end condition segments in terms of positions, slopes, widths (Prior Art, Decision Table, paragraph [0010]), it would have been obvious to provide a graphical representation of such segments in form of "graphical display" because the graphical representation of line segments within the roadway design improves the visual recognize of the user instead of just describe in terms of position, slops, width, ...

Claim 3 adds into claim 2 "receiving user input placing the target at the location" (Prior Art, user-defined target along the ground; paragraph [0007]).

As per claim 5, Prior Art teaches the claimed "method" comprising:  
"determining targets for a plurality of end conditions; receiving user input selecting one of the targets" (Prior Art, the target point is defined as existing ground; paragraph [0007]); "dynamically solving the at least one end condition based on a location of a target; and dynamically modifying the display to reflect valid end conditions" (Prior Art, the dynamically calculation and modification in case of valid end conditions; the segments of end conditions hit the target; paragraph [0006]). It is noted that Prior Art does not explicitly teach the "displaying the targets to a user" as claimed. However, given the definition of targets in terms of positions, defined ground (Prior Art, paragraphs [007] – [0009]), it would have been obvious to provide a graphical representation of such targets in form of "graphical display" because the graphical representation of line segments within the roadway design improves the visual recognize of the user instead of just describe in terms of position, existing ground, ...

Claim 6 is similar to claim 2 which defines the target and determining and displaying the valid solution," and adds that the target is defined by a pointer on the display's location which the Prior art does not teach. However, given target definition is a position on the existing ground (Prior art, [0007]) and the graphic Roadway design software INROADS (Prior Art, [0005]), it would have been obvious to use a pointer to

define a position on the display (official notice) because the use of a pointer to define a point on the displayed object is widely known in the art.

Claim 8 adds into claim 6 "tracking the positions" with the pointer which the Prior art does not teach. However, given target definition is a position on the existing ground (Prior art, [0007]) and the graphic Roadway design software INROADS (Prior Art, [0005]), it would have been obvious to use a pointer to tracking a position on the display (official notice) because the use of a pointer to define a point on the displayed object is widely known in the art.

As per claim 10, Prior Art teaches the claimed "method" comprising:  
"receiving user input defining properties of an end condition" (Prior Art, Decision table is used to define an end conditions; the segments HA and HB, paragraph [0008]);  
"dynamically solving the at least one end condition based on a location of a target; and  
dynamically modifying the display to reflect valid end conditions" (Prior Art, the dynamically calculation and modification in case of valid end conditions; the segments of end conditions hit the target; paragraph [0006]). It is noted that Prior Art does not explicitly teach the "graphical display" of the end condition segments as claimed. However, given the definition of end condition segments in terms of positions, slopes, widths (Prior Art, Decision Table, paragraph [0010]), it would have been obvious to provide a graphical representation of such segments in form of "graphical display" because the graphical representation of line segments within the roadway design

improves the visual recognize of the user instead of just describe in terms of position, slops, width, ...

Claim 11 adds into claim 10 "presenting a graphical user interface to a user" which would have been obvious to a graphical interface application as Inroads (Prior Art, paragraph [0005]) in which the data such as position, slop, width of the end conditions are entered (official notice).

Claims 12-15 add into claim 10 the properties of the end conditions (wherein the properties include at least one of a priority, a target type, a target name, an offset, and benching information; wherein the target type includes at least one of a surface, a material, an elevation, a vertical plane, a horizontal plane, and a point; wherein the horizontal plane is one of a feature and an alignment; wherein the vertical plane is one of a feature and an alignment) which would have been obvious (official notice) to the roadway design art (Prior Art, Inroads software, paragraph [0005]). Since it appears that an Inroads software manual is available to Applicant who are familiar in the Roadway Design area, Applicant is requested to provide these supported documents for assisting Examiner in this case.

Claim 16 adds into claim 10 "locating a point within a template that represents a beginning of the end condition; solving the end conditions that begin at the point" (Prior

Art, Decision table is used to define an end conditions; the beginning end condition point A of the segments HA and HB, paragraph [0008]). It is noted that Prior Art does not explicitly teach the “graphical display” of the valid end condition segment as claimed. However, given the definition of end condition segments in terms of positions, slopes, widths (Prior Art, Decision Table, paragraph [0010]), it would have been obvious to provide a graphical representation of such segments in form of “graphical display” because the graphical representation of line segments within the roadway design improves the visual recognize of the user instead of just describe in terms of position, slops, width, ...

Claim 17 adds into claim 10 “solving the end condition starting with a highest priority and proceeding to a lowest priority” which would have been obvious (official notice) to the roadway design art (Prior Art, Inroads software, paragraph [0005]). Since it appears that an Inroads software manual is available to Applicant who are familiar in the Roadway Design area, Applicant is requested to provide these supported documents for assisting Examiner in this case.

Claim 18 adds into claim 10 “chaining a second end condition to the end condition” (Prior Art, a list of segments; paragraph [0009]).

Claim 19 adds into claim 18 “determining a solution to the second end condition; and validating the solution only when all end conditions in the chain have valid



solutions" (Prior art, when a segment of the chained segments does produce a final intersection, the table stops; paragraph [0009]).

Claim 20 is similar to claim 1 but adds "displaying valid end conditions differently from not valid end conditions" which the Prior Art does not teach. However, given Prior Art's roadway design's processes ([0006]-[0009]) to decide whether the end conditions are valid, it would have been obvious to show the valid and not valid end conditions differently because that is the purpose of the processes to decide whether the end conditions are valid. It is noted that Prior Art does not explicitly teach the "graphical display" of the end condition segments as claimed. However, given the definition of end condition segments in terms of positions, slopes, widths (Prior Art, Decision Table, paragraph [0010]), it would have been obvious to provide a graphical representation of such segments in form of "graphical display" because the graphical representation of line segments within the roadway design improves the visual recognize of the user instead of just describe in terms of position, slopes, width, ...

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (571) 272 7645. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272 7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phu K. Nguyen/  
Primary Examiner, Art Unit 2628